"Express Mail" mailing label number
EV 906854815 US
Date of Deposit: April 13, 2007

Our Case No. 10022/580

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application:	)
	)
Roland Hengerer	)
	) Group Art Unit: 2857
Serial No.: 10/766,738	)
	) Examiner: Desta, Elias
Filed: January 27, 2004	)
	)
For: DETERMINATION OF THE AGE, IDENTIFICATION AND SEALING OF A PRODUCT CONTAINING VOLATILE COMPONENTS	)

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant requests review of the Final Rejection mailed February 13, 2007 (hereinafter "the Final Office Action"), in the above-identified application as to Claims 1-14. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reasons stated on the attached sheets. No more than five (5) pages are provided. No claims have been cancelled.

REMARKS

A. Non-statutory Subject Matter

In the Final Rejection, claims 10 and 11 were rejected in the Office Action under 35 U.S.C. §101 for being directed to non-statutory subject matter for failing to recite a "useful, concrete and tangible" outcome. Claim 10 recites the outcome of the recited process as "determining whether said impermeable seal is broken based on said reference scent ratio (σ_0)." The outcome of the invention of independent claim 10 is useful pursuant to 35

U.S.C. § 101 for the reasons given at page 12 of Applicant's Amendment filed on November 9, 2006 (hereinafter "the Amendment"). Page 3 of the Final Office Action asserts that claim 10 requires a subsequent step so that the output of the process is "conveyed to the end user." MPEP § 2106 IV.C.2.(2)(b) states that it is not necessary for a claimed invention to change articles or materials to a different state or thing. Instead, the claimed invention is tangible if it sets forth a practical application of a judicial exception to produce a real-world result. In the present case, the invention of claim 10 provides a tangible result in that one of ordinary skill would immediately appreciate the usefulness of claim 10's determination of whether a seal was broken when it is used for determining if the contents of the sealed object may be spoiled or tampered with by outside influences. It cannot be disputed that determining whether the contents of a sealed object may be spoiled or tampered with pursuant to the invention of claim 10 would produce a beneficial real-world result.

The outcome of the invention of claim 10 is concrete in that the determination of whether a seal is broken as determined in claim 10 can be substantially repeated, given the same operating conditions. For example, if it was theoretically possible to have two identical objects that are sealed in an identical manner and then measure the reference scent ratio for both objects at the same time and in the same manner, then the change in a current scent ratio with respect to the reference scent ratio would be the same if both objects were unsealed simultaneously and in an identical manner. Since determining whether a seal is broken as defined in claim 10 produces a "useful, concrete and tangible" outcome, the rejection should be withdrawn.

Claim 11 depends directly or indirectly on claim 10 and so its rejection is improper for the same reasons given above as to why the rejection of claim 10 is improper.

B. Utility

1. Claims 1-8, 12 and 14

Claims 1-8, 12 and 14 were rejected in the Final Office Action under 35 U.S.C. §101 for lacking utility for being inoperative. Applicant traverses the rejection for being based on false assumptions and faulty analysis. In particular, the Examiner asserts at page 3 of the Final Office Action that "[i]f eta ($\eta(\xi, t)$) is considered the same, then $\alpha_1 = \alpha_2$, $I_1 = I_1$ (sic),

. . . etc. which would make the alleged equation invalid." There is nothing in Applicant's Specification that suggests that having the $\eta(\xi(t))$ terms for each sensor being identical will necessarily result in $\alpha_1 = \alpha_2$, $I_1 = I_2$ Indeed, Applicant's Specification at page 4 states that $\eta(\xi(t))$ takes into account all external parameters ξ "for which the evolution versus time is not necessarily known." Page 4 of Applicant's Specification further states that α designates a time constant. Since α does not vary with time and the external parameters ξ on which $\eta(\xi(t))$ depends are required to change/evolve with time, it follows that $\eta(\xi(t))$ does not depend on the constant α. Accordingly, the Examiner's assertion that $\alpha_1 = \alpha_2$ if $\eta_1(\xi(t)) = \eta_2(\xi(t))$ has no merit. It then follows that the Examiner's assertion that the equation in claim 2 and related equations in Applicant's Specification are invalid has no merit.

The Examiner at page 4 of the Final Office Action has requested that Applicant revisit paragraph 0027 of his Specification. The paragraph is given below:

> Since the two signals [$I_1(t, \xi(t)) = \eta_1(\xi(t))\, I_{01} \cdot e^{-\alpha_1 t}$ and
>
> $I_2(t, \xi(t)) = \eta_2(\xi(t))\, I_{02} \cdot e^{-\alpha_2 t}$] are always measured simultaneously, the term ($\eta(\xi(t))$ is essentially identical in both expressions. This constitutes a close approximation provided that the two substances show similar absorption behavior (e.g., due to identical attachment groups of molecules) and that the external parameters are kept within reasonable limits (e.g.
>
> ± 20%). (Bracketed material added)

The above passage makes it quite clear that $\eta(\xi(t))$ is <u>not</u> the same for both sensors. By stating that the $\eta(\xi(t))$ factors for both sensors are "essentially identical" means that in reality that they are <u>near</u> in value and <u>not</u> identical in value. Applicant's Specification at page 5 has disclosed that the values of $\eta_1(\xi(t))$ and $\eta_2(\xi(t))$ for the sensors are so near in value that when you take their ratio in equation (2) a value of one is essentially achieved and so they cancel each other out in the equation. Since Applicant has provided an analysis of the equations and the term $\eta(\xi(t))$ in his Specification and on pages 13-15 of the Amendment that would have been understood to be correct by one of ordinary skill in the art, the rejection has no merit and should be withdrawn.

It is noted that the Examiner asserts at page 4 of the Final Office Action that the amendment to the specification made in the Amendment "did not reflect what applicant has

presented in page 14 of the" Amendment. Applicant interprets this assertion as regarding Applicant's statement that the eta terms of equation 2 cancel one another out. While equation 2 does not explicitly show eta terms, they are inferred to be there as shown by the second line of the reformulation of equation 2 presented at page 15 of the Amendment which replaces $I_1$and I_2 with the relationship of equation 1 in Applicant's Specification at page 4 which contains the term eta. The reformulation is based on the assumption that the ratio of the eta terms for the two sensors is approximately equal to one.

Claims 2-7 and 14 depend directly or indirectly on claim 1 (claims 2-7) or claim 12 (claim 14) and so their rejections are improper for the same reasons given above as to why the rejections of claims 1 and 12 are improper.

2. Claims 9 and 13

Claim 9 was rejected in the Final Office Action under 35 U.S.C. §101 for lacking utility because the volatile characteristics of the first and second volatile components and the volatile identification code were unknown. Applicant disagrees. Applicant's Specification at paragraph 0013 discusses a smell signature of a volatile component which decays in time. Accordingly, such a smell signature is an example of a volatile characteristic. With that understanding in mind, one of ordinary skill would readily understand from the embodiment of paragraphs 0032-0037 of Applicant's Specification how to use multiple sensors to generate unique scent prints to be used as an identification code. Since the invention of claim 9 is useful pursuant to 35 U.S.C. §101, the rejection should be withdrawn.

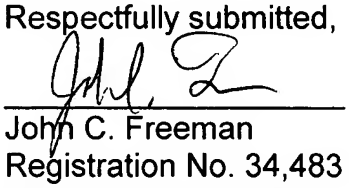
Claim 13 depends directly on claim 9 and so its rejection is improper for the same reasons given above as to why the rejection of claim 9 is improper.

3. Claims 10 and 11

Claims 10 and 11 were rejected in the Office Action under 35 U.S.C. §101 for lacking utility for being inoperative. The rejection is based on the assertion that the η factors are not identical for the method of sealing an object of claims 10 and 11. However, as mentioned above in Section B.1, Applicant has only assumed that the η factors of each sensor cancel one another out in equation 2). Accordingly, the formula used in paragraph 0049 to check the sealing of an object is correct and so the rejection is improper.

In summary, the Examiner has clearly failed to meet his burden to establish a *prima facie* case of unpatentability of the pending claims in the present Office Action. Accordingly, the rejections should be withdrawn and the claims allowed.

Respectfully submitted,



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Dated: April 13, 2007